

ASN-RDA/CHENG & NDIA
Naval Interoperability Workshop
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SUGGESTIONS FOR THE INTEROPERABILITY TEST CYCLE

Presented by Robin Mickle
VP, Fleet Systems Engineering

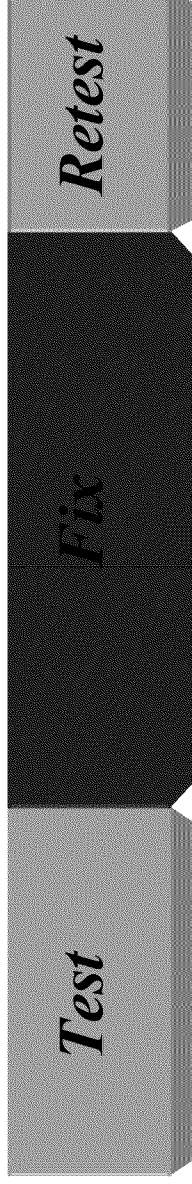
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Abstract		
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Background

“The technology is here today to system engineer at the Battle Force level. To do so requires that we change the way that we acquire, test, and certify Battle Force units. For example, today our shipyards deliver very capable ships. But, they are not (necessarily) BG interoperable -- they are not required (measurably) to be. If we required ships to be delivered Battle Group interoperable, then we should require them to be tested in a Battle Force environment as a ‘family of systems’ **before delivery.**”

Basic Test Cycle



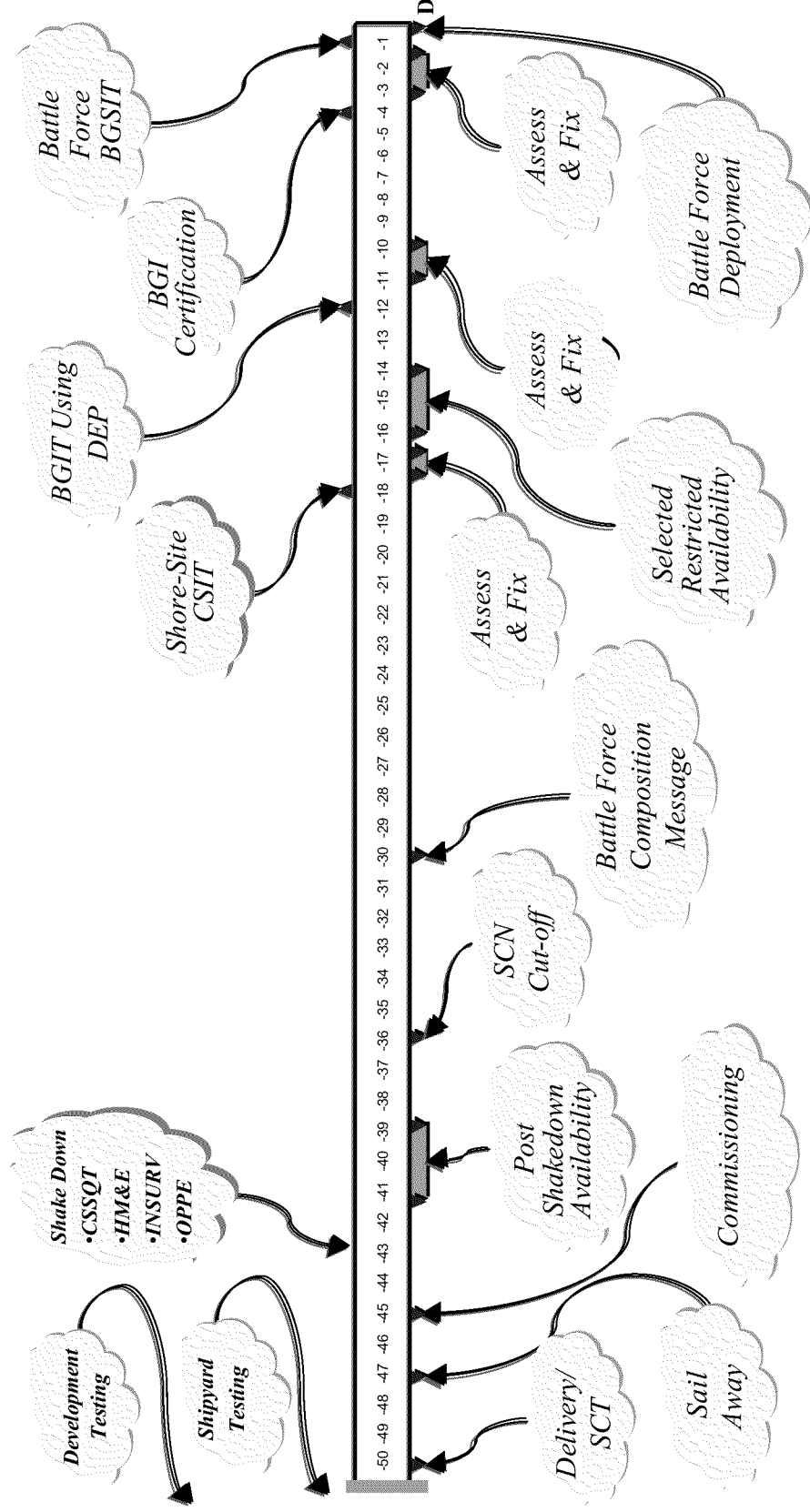
- ★ The purpose of testing is to **identify and fix** problems
- ★ Must allow time to fix the problems, many of which are complex
- ★ Must retest to ensure fixes work, without causing collateral problems
 - Must ensure the right assets are available to fix and retest

Navy CS Interoperability Test Cycle

Test Stage	Purpose
Developmental Testing	Functionality of individual system; at development site or land-based test site
Shipyard Testing	Operation of ship components onboard ship
Combat System Integration Test (CSIT)	Interoperability of computer programs and interfaces; primarily single platform; at land-based test site
Battle Group Interoperability Test (BGIT)	Interoperability of CS and TADIL components of each BG ship class; utilizes the DEP as a tool
Battle Group System Integration Test (BGSIT)	BG interoperability; all live and underway

This is a logical series of tests, that increase in interoperability complexity at each stage.

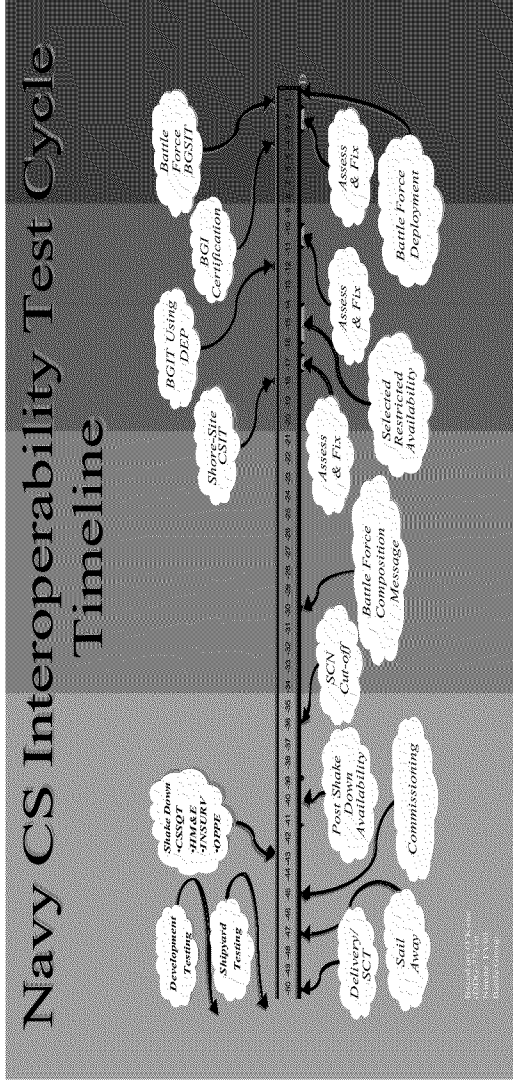
Navy CS Interoperability Test Cycle Timeline



Based on O'Kane
(DDG-77) in
Nimitz FY03
Battle Group

This is normally viewed as at least two schedules, so the time between ship introduction and BG interoperability testing is not readily apparent.

Timeline Comments



- ★ First BGI test occurs late in the cycle
- ★ BGSIT is the first fully live interoperability test. There is little time for assess, fix, and retest
 - BGSIT should only be a certification
- ★ Period between Sailaway and CSIT contributes little to BGI
- ★ How can Industry help do more effective BGI testing earlier?

Suggestion #1

- ★ Put DEP nodes in the shipyards and make BGI testing a ship delivery requirement
 - Necessitates some BGI testing during shipyard testing, much earlier in cycle
 - Allows for correction of some interoperability problems during PSA with SCN funding
 - Delivers a more capable, immediately useful ship to the fleet

Suggestion #2

- ★Put DEP nodes in homeports
 - Allows inclusion of new platforms and other selected ships in BGIT; get fully live sooner
 - Facilitates other BGI testing (if desired) during the period between Sailaway and CSIT, perhaps during homeport availabilities

Suggestion #3

- ★ Move BGI testing “left” at every opportunity
 - Include live sensor testing in BGIT by including ship(s) in the testing (for example, one AEGIS platform, one ACDS platform, plus DEP sites)
 - Place more emphasis on multi-platform testing in CSIT
 - Gradually move CSIT left in the schedule

Summary

- ★Must do BGI testing earlier in the schedule
- ★Make more flexible use of our existing interoperability tests; include BGI testing in all phases starting with shipyard testing
- ★Get live platforms involved in BGI testing sooner via homeport DEP
- ★The inherent capability to move BGI testing “left” is provided by DEP

Back-up Slides

Total Ship Test Program

- ★ Total ship testing is the systematic planning, organizing, execution and reporting of testing from the total ship perspective. The Total Ship Test Program (TSTP) was instituted in 1974 to establish policies and standard practices for **ship testing during industrial periods** in order to help assure proper accomplishment of the industrial work and to verify the material readiness of the ship for fleet operations. These policies and procedures pertain to the industrial periods of a ship's life; e.g., Construction, Conversion, Modernization, Post-Shakedown, Availability, Regular Overhaul, Selected Restricted Availability, Phased Maintenance Availability, etc...

Total Ship Test Program continued...

★ Scope (Extract)

- ... The requirements of this manual are the minimum necessary for effectively executing ship test programs; *They do not modify or supersede other requirements that are separately imposed for selected components, systems, or classes of ships, such as those in the references of Appendix A...*

★ Appendix A - References

- ... NAVSEAINST 3960.2 Series - Test and Evaluation...
(Note: Superseded by DOD 5000 Series Mandatory Procedures for Major Defense Acquisition Programs...)

★ Appendix C - Responsibilities... (of other activities)

- NAVSEA, NAVAIR, and SPAWAR Shipboard System Manager.
Ensure timely completion of systems engineering, the conduct of **development and operations testing**, EM compatibility testing and the establishment of a stable product baseline, of systems being developed for ship board installation and use

TSTP Test Stages

- ★ Stage 1 - Material Receipt and Inspection, and Shop Tests
 - Provides for inventory management and physical inspection of all equipment and associated documentation...
- ★ Stage 2 - Shipboard Installation Tests and Inspection
 - Demonstrate installation in accordance with the requirements of the ship specification
- ★ Stage 3 - Equipment Tests
 - Demonstrate that the individual equipment and groups of equipment meet their design parameter and perform within the limits and tolerances required by the ship specification
- ★ Stage 4 - Intra-System Tests
 - Demonstrate that intra-system (equipment and functions entirely within one independent system) operation and alignment are within the limits and tolerances required by the ship specification

TSTP Test Stages continued...

- ★ Stage 5 - Inter-system Tests
 - Demonstrate that intersystem (two or more independent systems that interface) operation and alignment are within the limits and tolerances required by the ship specification
- ★ Stage 6 - Special Tests
 - Those tests which require special simulation facilities or significant facilities/resources external to the immediate testing location. Tests for special purposes, such as access to equipment for maintenance, repair or removal, reliability, maintainability and availability demonstrations, radiation hazards (RADHAZ) testing, EMI testing, electromagnetic interference and the ship inclining experiment are included. Special tests can apply to equipment, a system or a number of systems, and may require total ship operability
- ★ Stage 7 - Trials Tests
 - Tests that are unique to Builder's Trials (BT) and Acceptance Trails (AT), including the associate prerequisite dockside testing prior to getting underway

DDG-51 Master Planning Schedule

DDG 51 CLASS MASTER PLANNING SCHEDULE (CONTRACT AWARD TO DELIVERY)

CURRENT AS OF 31 January 2001

CYR 4000P
(703) 802-9402 x358

HULL/	SHIP NAME	CONTRACT	START	LAY	LAUNCH/	CHRISTENING	AEGLIS ⁵	TRIAL ALPHA	TRIAL BRAVO	TRIAL	DELIVERY/
YARD		AWARD	FAB	KEEL	FLOAT-OFF		OFF			CHARLIE	SCT
05	USS ARLEIGH BURKE	"04-02-88	P "05-06-87	"12-08-88	"05-16-89	"05-16-89	"03-27-90	"14-19-90	"04-16-91	"04-01-91	"04-26-91
07	USS BARRY	"06-26-87	C "05-11-89	"02-28-90	"05-10-91	"06-08-91	"03-27-92	"05-29-92	"05-16-92	"01-28-91	"04-29-91
03B	USS JOHN PAUL JONES	"06-26-87	C "05-16-89	"02-26-90	"03-09-91	"06-08-91	"03-27-92	"05-29-92	"05-16-92	"05-16-92	"05-16-92
04B	USS CURTIS WILBUR	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
06B	USS STOUT	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
08B	USS JOHN S. McCain	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
07B	USS MITTSCHER	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
08B	USS LABOON	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
09B	USS RUSSELL	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
00B	USS PAUL HAMILTON	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
01B	USS RAMAGE	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
02B	USS FITZGERALD	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
03B	USS STEPHEN	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
04B	USS CARNEY	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
05B	USS BENFOLD	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
06B	USS GONZALEZ	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
07B	USS COLE	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
08B	USS THE SULLIVANS	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93
09B	USS MILBURN	"12-13-88	C "05-13-90	"03-12-91	"05-16-92	"05-16-92	"12-10-92	"07-29-93	"10-05-93	"11-02-93	"12-10-93

Ships built at Ingalls Shipbuilding
B Ships built at Bath Iron Works
§ Ingalls AEGLIS Light Off Planning Dates are Start Dates
§ Bath AEGLIS Light Off Planning Dates are Week-Ending
§ Shipyard Planning Trial Dates are Start Dates
§ Combined Trials Alpha and Bravo

End (1)

DDG-51 Master Planning Schedule

DDG 51 CLASS MASTER PLANNING SCHEDULE
(DELIVERY TO SCN CUTOFF)

CURRENT AS OF 31 January 2001											CPR 4000P (703) 602-9426 x355	
HULL/ YARD	UIC	SHIP NAME	COMPO	FLEET	HOME PORT	DELIVERY/ SCT	SAILAWAY	COMMISSIONING	FCT START	PSA START	PSA END	SCN CUTOFF
51B	21467	USS ARLEIGH BURKE	CDR Alan Eschbeck	LANT	NORVA	*04-29-91	*08-27-91	*07-04-91	*12-09-91	*03-29-92	*07-13-92	*02-29-93
52B	21060	USS BARRY	CDR Bill Bingham	LANT	NORVA	*10-19-92	*12-14-92	*12-12-92	*04-26-93	*05-03-93	*09-02-93	*11-30-93
53B	21313	USS JOHN PAUL JONES	CDR Tom Carney	PAC	SDGO	*08-20-93	*10-29-93	*12-18-93	*09-26-94	*07-10-94	*09-23-94	*03-31-95
54B	21644	USS CURTIS WILBUR	CDR Don Roane, Jr.#	PAC	YOKO	*12-10-93	*02-14-94	*03-19-94	*08-15-94	*09-13-94	*12-19-94	*01-31-95
55B	21686	USS STOUT	CDR Clifford Sharpe#	LANT	NORVA	*05-16-94	*08-09-94	*08-13-94	*03-05-95	*03-20-95	*07-03-95	*07-31-95
56B	21686	USS JOHN S. MCCAIN	CDR Jeff Hartsen	PAC	YOKO	*05-27-94	*07-27-94	*07-02-94	*01-23-95	*02-27-95	*05-05-95	*08-30-95
57B	21687	USS MITTSCHER	CDR Frank Pandolfo	LANT	NORVA	*10-09-94	*12-03-94	*12-10-94	04-24-95	*06-26-95	*10-02-95	*11-30-95
58B	21620	USS LABOON	CDR Eugene Moran	LANT	NORVA	*12-02-94	*02-27-95	*03-18-95	*07-31-95	*09-12-95	*12-11-95	*01-31-96
59B	21621	USS RUSSELL	CDR Robert Winzor	PAC	PEARL	*03-20-95	*06-29-95	*08-20-95	*10-23-95	*10-30-95	*12-07-95	*04-30-96
60B	21622	USS PAUL HAMILTON	CDR Dennis O'Meara	PAC	PEARL	*03-10-95	*05-12-95	*05-27-95	(*)12-11-95	*01-08-96	*03-01-96	*04-30-96
61B	21623	USS RAMAGE	CDR Chris Kley	LANT	NORVA	*05-08-95	*07-12-95	*07-22-95	(*)01-15-96	*02-12-96	*04-15-96	*08-30-96
62B	21624	USS FITZGERALD	CDR Alfred Collins	PAC	SDGO	*07-28-95	*10-02-95	*10-14-95	(*)03-25-96	*05-20-96	*08-12-96	*09-30-96
63B	21625	USS STETHEM	CDR Craig Fuller	PAC	SDGO	*07-24-95	*09-18-95	*10-21-95	(*)05-10-96	*04-01-96	*06-10-96	*08-31-96
64B	21623	USS CARNEY	CDR Mike Jacobson	LANT	MYPT	*12-06-95	*03-22-96	*04-13-96	(*)12-02-96	*09-16-96	*12-06-96	*02-28-97
65B	21940	USS BENFOLD	CDR Adam Leslie#	PAC	SDGO	*12-04-95	*02-29-96	*03-30-96	(*)06-19-96	*09-30-96	*12-16-96	*01-31-97
66B	21833	USS GONZALEZ	CDR Patrick O'Rourke	LANT	NORVA	*06-14-96	*08-19-96	*10-12-96	*04-05-98	*01-13-97	*09-27-97	*08-30-98
67B	21941	USS COLE	CDR Kirk Lippold	LANT	NORVA	*03-11-96	*05-29-96	*06-08-96	(*)12-09-96	*01-17-97	*03-31-97	*04-30-97
68B	21942	USS TNE SULLIVANS	CDR Daniel Keller	LANT	MYPT	*11-22-96	*03-25-97	*04-19-97	(*)07-28-97	*09-08-97	*11-23-97	*07-31-98
69B	21943	USS MILLUS	CDR Thomas Rowland	PAC	SDGO	*08-19-96	*11-26-96	*11-23-96	(*)06-10-97	*08-23-97	*09-15-97	*05-31-98

Homeports and fleet assignments are based on OPNAVNOTE S3111.
All new construction ship homeport and fleet assignments are subject to change until official homeport message is released by CNO.

All dates are either Planning or Actual. For additional information concerning ship schedules, contact the Production Officer, FMS 40003, at the AEGIS Destroyer Division (703) 602-3476 x350.

* Actual Dates
Change from Last Issue (1 Sep 00)
(!) Readload Scope FCT

DDG-51 Master Planning Schedule

DDG 51 CLASS MASTER PLANNING SCHEDULE
(CONTRACT AWARD TO DELIVERY)

CURRENT AS OF 31 January 2001													(CONTRACT AWARD TO DELIVERY)												
FY	YARD	SHIP NAME	CONTRACT AWARD	START FAB	LAY KEEL	LAUNCH/ FLOAT-OFF	CHRISTENING	MEGIS ⁵ LIGHT OFF	TRIAL ALPHA	TRIAL BRAVO	TRIAL CHARLIE	DELIVERY ⁶ SCT													
92	70B	USS HOPPER																							
			P	*02-06-94	*02-23-95	*01-06-96	*01-12-96	*02-25-97	*02-25-97	*03-18-97	*04-11-97														
			C	02-06-94	02-28-95	02-03-96	08-04-96	01-23-97	03-21-97	04-09-97	06-20-97														
				*06-27-94	*04-10-95	*03-22-96	*04-20-96	*02-04-97	*02-04-97	*03-03-97	*04-21-97														
93	72B	USS MAHAN																							
			P	*07-17-94	*08-17-95	*06-29-96	*06-29-96	*12-19-96	*07-21-97	*07-21-97	*08-05-97	*08-22-97													
			C	07-17-94	07-18-95	06-29-96	06-29-96	07-16-97	08-29-97	08-17-97	10-25-97														
				*01-15-95	*01-11-96	*11-10-96	*11-09-96	*06-30-97	*01-26-98	*01-26-98	*02-13-98														
94	74A	USS McFAUL																							
			P	*04-24-95	*01-26-96	*01-18-97	*04-12-97	*06-09-97	*01-18-97	*01-18-97	*02-15-97	*02-23-98													
			C	03-09-96	10-19-96	11-28-96	06-01-97	12-08-97	01-19-98	02-02-98	03-12-98														
				*06-18-96	*07-09-96	*05-03-97	*05-03-97	*01-09-98	*06-29-98	*06-29-98	*07-13-98	*08-21-98													
95	76B	USS HIGGINS																							
			P	06-23-95	*11-14-96	*10-04-97	*10-04-97	*05-15-98	*01-16-98	*01-16-98	*02-14-98	*04-14-99													
			C	06-23-95	04-20-96	10-04-97	10-04-97	10-19-97	07-03-98	07-18-98	08-21-98	08-21-98													
				*11-26-96	10-13-96	09-20-97	*03-28-98	*10-23-98	*03-30-99	*03-30-99	*04-26-99	*05-19-99													
96	77B	USS OKANE																							
			P	*07-20-94	C	11-06-96	06-11-97	10-25-98	04-02-99	04-02-99	04-20-99	06-26-99													
				*02-19-96	*12-02-96	*11-12-97	*11-15-97	*04-20-98	*01-02-98	*01-02-98	*01-16-98	*01-11-99													
				07-17-96	06-06-98	10-07-98	10-07-98	06-14-99	08-11-99	08-26-99	08-18-99														
97	79B	USS OSCAR AUSTIN																							
			P	*09-22-96	*10-09-97	*11-07-98	*11-07-98	*06-05-99	*02-03-00	*03-20-00	*04-11-00	*05-11-00													
			C	09-06-97	03-11-98	12-09-98	07-18-99	03-16-00	03-28-00	04-18-00	06-11-00														
				*03-10-97	*12-16-97	*01-10-99	*01-23-99	*07-12-99	*02-28-00	*03-27-00	*05-07-00	*06-12-00													
98	80A	USS ROOSEVELT																							
			P	*01-08-95	C	06-13-97	04-03-98	10-01-99	06-08-00	07-06-00	07-28-00	08-28-00													
				*03-31-97	*05-07-99	*04-17-99	*04-17-99	*12-03-99	*07-24-00	*07-24-00	*09-15-00	*10-13-00													
				03-27-98	10-30-98	07-30-99	11-19-99	06-22-00	11-23-00	12-21-00	01-11-01	02-05-01													
99	82A	LASSEN																							
			P	*10-27-97	*08-24-98	*10-16-99	*11-06-99	*04-04-00	*01-13-00	*01-13-00	*02-05-01	02-05-01													
			C	11-28-97	09-18-98	11-19-99	06-22-00	11-23-00	12-21-00	01-11-01	02-26-01														
				*11-14-97	*12-09-98	*11-20-99	*11-20-99	*06-09-00	*05-27-01#	*05-27-01#	*06-05-01#	*06-23-01#													
00	84A	BULL KELEY																							
			P	06-13-98	03-18-99	03-02-00	08-21-00	*07-29-01#	*08-12-01#	*08-12-01#	*08-23-01#														
			C	07-20-98	04-29-99	06-21-00	*06-24-00	*11-06-00	*06-18-01#	*07-09-01	08-20-01														
				*07-30-98	04-29-99	06-23-00	06-23-00	11-13-00	06-21-01	06-21-01	08-04-01														
01	85B	McCAW-BELL																							
			P	*07-10-98	*07-16-99	*07-02-00	*07-02-00	*05-13-01#	*01-02-01#	*01-14-02#	*02-12-02#	*03-06-02#													
			C	02-06-99	09-10-99	08-26-00	02-24-01#	*08-10-01#	*02-01-02#	*02-01-02#	*03-08-02#	*03-29-02#													
				*01-04-99	*12-13-99	*11-22-00	*02-24-01#	04-30-01	12-03-01	12-17-01#	*01-21-02#	*02-26-02#													
02	86A	SHOLUP																							
			P	01-22-99	01-10-00	12-15-00	06-21-01	12-08-01	12-06-01	01-17-02	*02-03-11-02#	*02-03-11-02#													
			C	*12-24-98	*01-20-00	*06-23-01#	*06-23-01#	*12-16-01#	*06-20-02#	*06-20-02#	*06-10-02#	*06-04-02#													
				10-08-99	06-12-00	*02-07-22-01#	12-02-01 02#	*02-04-02#	*02-10-04-02#	*02-10-04-02#	*02-11-04-02#	*02-11-04-02#													
03	88A	PREBLE																							
			P	*09-20-99	*06-23-00	*06-07-01	*06-09-01#	*10-22-01	*06-17-02	*07-15-02	*08-19-02	*08-19-02													
			C	09-24-99	06-23-00	06-26-01	10-12-01	06-18-02	06-18-02	07-21-02	08-06-02														
1 Ships built at Ingalls Shipbuilding													* Actual Dates												
2 Ships built at Bath Iron Works													# Change from Last Issue (1 Sep 00)												
													‡ Combined Trials Alpha and Bravo												
													§ Under Navy Review												

* Actual Dates
Change from Last Issue (1 Sep 00)
‡ Combined Trials Alpha and Bravo
(2) Under Navy Review

P Yard Planning Date
C Contract Date

§ Ingalls AECS Light Off Planning Dates are Start Dates
§ BWI AECS Light Off Planning Dates are Week-Ending
All Shipyard Planning Trial Dates are Start Dates
All Contract Trial Dates are Complete Dates

1 Ships built at Ingalls Shipbuilding
B Ships built at Bath Iron Works

DDG-51 Master Planning Schedule

DDG 51 CLASS MASTER PLANNING SCHEDULE
(DELIVERY TO SCN CUTOFF)

CURRENT AS OF 31 January 2001

OPR 400DP
(703) 602-9408 x385

HULL/ YARD	UIC	SHIP NAME	CO/PO	FLEET	HOME PORT	DELIVERY/ SCT	SAILAWAY	COMMISSIONING	FCT START	PSA START	PSA END	SCN CUTOFF
70B	21944	USS HOPPER	CDR John Sorce	PAC	PEARL	*04-11-97	*08-01-97	*09-08-97	*02-09-98	*03-30-98	*05-25-98	*07-31-98
71A	21945	USS ROSS	CDR Mike Hawley	LANT	NORVA	*04-21-97	*06-16-97	*06-28-97	(1)*01-26-98	*02-11-98	*05-04-98	*06-31-98
72B	21946	USS BAHAM	CDR David Robertson, Jr.#	LANT	NORVA	*08-22-97	*01-16-98	*02-14-98	(1)*07-27-98	*08-27-98	*11-16-98	*05-31-99
73B	21947	USS DECATUR	CDR Pete Gunaladase	PAC	SDGO	*03-13-98	*07-06-98	*08-29-98	(1)*01-19-99	*01-25-99	*04-09-99	*06-30-99
74A	21948	USS McFALL	CDR Bruce Curry	LANT	NORVA	*02-23-98	*04-17-98	*04-25-98	(1)*08-01-98	*10-05-98	*12-11-98	*03-31-99
75B	21949	USS DONALD COOK	CDR Matthew Sharpe	LANT	NORVA	*08-21-98	*11-16-98	*12-04-98	(1)*05-03-99	*06-01-99	*08-27-99	*06-30-00
76B	21950	USS HIGGINS	CDR Bill Ault	PAC	SDGO	*01-14-99	*03-26-99	*04-24-99	(1)*08-30-99	*04-20-99 SW/M	*12-13-99	*02-29-00
77B	21951	USS O'WANE	CDR Taylor Skardon#	PAC	PEARL	*05-19-99	*08-27-99	*10-23-99	(1)*01-24-00 ISI/PEARL	*02-21-00 ISI/PEARL	*04-28-00	*07-31-00
78A	21952	USS PORTER	CDR Mike Smith	LANT	NORVA	*01-11-99	*03-12-99	*06-20-99	(1)*08-09-99	*08-20-99 ISI	*11-12-99	*02-29-00
79B	21953	USS OSCAR AUSTIN	CDR Paul Smith	LANT	NORVA	*05-11-00	*07-21-00	*08-19-00	*11-27-00	*02-22-01 BIW	*06-29-01	*06-30-01
80M	21954	USS ROOSEVELT	CDR Matt Botchella	LANT	MYPT	*08-12-00	*08-21-00	*10-14-00	*01-22-01	*02-19-01 ISI	*06-11-01	*07-31-01
81B	21955	WINSTON S. CHURCHILL	CDR Mike Franken	LANT	NORVA	*10-13-00	*02-08-01#	03-19-01 NORVA	04-15-02#	05-06-02# BIW	06-30-02#	(2) TBD#
82A	21956	LASSEN	CDR Sean O'Connor	PAC	SDGO	02-05-01	04-05-01	04-21-01# TAMPA	08-13-01#	08-27-01# SW/M	11-16-01#	03-31-02
83B	22959	HOWARD	CDR Joe Nolan	PAC	SDGO	06-22-01#	08-14-01#	10-06-01# GALVESTON	04-08-02#	04-22-02# SW/M	07-26-02#	08-31-02#
84A	22962	BULKELEY	CDR Carlos Del Toro	LANT	NORVA	08-20-01	10-15-01	12-08-01# NEW YORK	FEB 02#	03-07-02# ISI	06-07-02#	09-30-02
85B	22963	McCAMPBELL	CDR Mark Montgomery	PAC	SDGO	03-08-02#	06-28-02#	TBD	DEC 02#	07-08-03# SW/M	11-04-03#	(2) TBD#
86A	22964	SHOUP	CDR Bernard Carter	PAC	Everett, WA	02-25-02#	04-22-02#	TBD	08-05-02	09-16-02 TBD	12-08-02	03-31-03
87B	22965	MASON	CDR Dave Gale	LANT	NORVA	10-04-02#	01-31-03#	TBD	AUG 03#	SEP 03 BIW	DEC 03#	12-31-03#
88A	22966	PREBLE	CDR Tim Batzler	PAC	SDGO	08-19-02	(2)11-08-02	TBD	03-31-03	04-28-03 SW/M#	07-21-03	10-31-03

Homeports and fleet assignments are based on OPNAVNOTE S3111.
All new construction ship homeport and fleet assignments are subject to change until official homeport message is released by CNO.

All dates are either Planning or Actual. For additional information concerning ship schedules, contact the Production Officer, PMS 400DG, at the AEGIS Destroyer Division (703) 602-3476 x330.

* Actual Dates
Change from Last Issue (1 Sep 00)
(1) Reduced Scope FCT
(2) Under Navy Review

DDG-51 Master Planning Schedule

DDG 51 CLASS MASTER PLANNING SCHEDULE
(CONTRACT AWARD TO DELIVERY)

CPIR 4000P
JTB1602-0408-0100

FY	HULL YARD	SHIP NAME	CONTRACT AWARD	START FAB	LAY KEEL	LAUNCH/ FLOAT-OFF	CHRISTENING	AEGIS [§] LIGHT OFF	TRIAL ALPHA	TRIAL BRAVO	TRIAL CHARLIE	DELIVERY/ SCT
98	881	MUSTIN	P	01-31-00	01-15-01	12-14-01	TBD	05-20-02	12-09-02#	12-09-02#	01-20-03#	03-10-03#
			C	03-27-00	01-15-01	12-14-01		05-20-02	02-07-03	02-07-03	03-14-03	04-28-03
98	90B	CHAFEE	P	06-16-99	03-25-01#	08-17-02#	08-17-02#	06-30-02#	03-03-03#	03-03-03#	03-25-03#	04-18-03#
			C	04-25-00	02-04-22-01#	12-09-15-02#		12-09-15-02#	12-04-22-03#	12-04-22-03#	03-05-13-03#	10-06-13-03#
99	911	PINKNEY	P	05-15-00	07-16-01	06-28-02	TBD	11-19-02	07-14-03#	08-04-03#	08-25-03#	10-06-03#
			C	08-25-00	07-16-01	06-28-02		11-19-02	06-08-03	06-08-03	08-19-03	10-27-03
99	92B	MOMSEN	P	03-06-00	09-09-01#	01-12-03#	02-01-03#	01-05-03#	12-09-08-03#	09-08-03#	09-30-03#	10-24-03#
			C	12-03-12-01#	12-10-15-01#	12-03-02-03#		12-04-21-03#	12-12-03#	12-12-03#	12-01-12-04#	12-01-30-04#
99	931	CHUNGHOON#	P	03-26-01	01-14-02	12-13-02	TBD	05-19-03	01-19-04#	01-19-04#	02-16-04#	04-05-04#
			C	03-28-01	01-14-02	12-13-02		05-19-03	02-08-04	02-08-04	03-12-04	04-28-04
99	94B	NITZE#	P	03-24-01	03-17-02#	08-03-03#	08-03-03#	07-13-03#	03-08-04#	03-08-04#	03-30-04#	04-23-04#
			C	12-11-11-01#	12-08-11-02#	12-12-21-03#		12-12-21-03#	12-06-22-04#	12-06-22-04#	12-09-12-04#	12-10-01-04#
99	951	TBD	P	09-24-01	07-15-02	06-27-03	TBD	11-17-03	06-21-04#	06-21-04#	07-19-04#	09-06-04#
			C	09-24-01	07-15-02	06-27-03		11-17-03	08-06-04	08-06-04	09-03-04	10-25-04
00	96B	TBD	P	11-19-01#	12-15-02#	04-17-04#	04-17-04#	04-04-04#	11-16-04#	11-16-04#	12-14-04#	01-14-05#
			C	12-07-12-02#	12-03-16-03#	12-09-10-04#		12-08-20-04#	12-04-22-05#	12-04-22-05#	12-05-13-05#	12-06-24-05#
97		TBD	P	03-24-02	01-13-03	12-12-03	TBD	05-17-04	11-15-04#	11-15-04#	12-13-04#	02-14-05#
			C	03-25-02	01-13-03	12-12-03		05-17-04	12-04-05	12-04-05	03-11-05	04-25-05
98		TBD	P	09-30-02	07-21-03	07-02-04	TBD	11-22-04	06-06-05#	06-06-05#	07-11-05#	08-29-05#
			C	09-30-02	07-21-03	07-02-04		11-22-04	06-12-05	06-12-05	09-18-05	10-31-05
01	99B	TBD	P	05-09-02#	07-06-03#	11-27-04#	11-27-04#	10-24-04#	06-14-05#	06-14-05#	07-12-05#	08-05-05#
			C	12-03-13-03#	12-11-23-03#	12-04-10-05#		12-04-21-05#	12-12-22-05#	12-12-22-05#	12-01-12-06#	12-02-17-06#
100		TBD	P	03-24-03	01-12-04	12-10-04	TBD	05-16-05	11-14-05#	11-14-05#	TBD	02-20-06#
			C	03-24-03	01-12-04	12-10-04		05-16-05	12-03-06	12-03-06	03-10-06	04-24-06
101		TBD	P	02-16-03#	03-14-04#	07-17-05#	07-17-05#	06-26-05#	02-14-06#	02-14-06#	03-14-06#	04-07-06#
			C	12-11-11-03#	12-07-25-04#	12-11-05#		12-12-20-05#	12-06-22-06#	12-06-22-06#	12-09-12-06#	12-10-20-06#

1. Ships built at Ingalls Shipbuilding
B. Ships built at Bath Iron Works (BIW)
§ Ingalls AEGIS Light Off Planning Dates are Start Dates
§ BIW AEGIS Light Off Planning Dates are Week-Ending
All Shipyard Planning Trial Dates are Start Dates
All Contract Trial Dates are Complete Dates

P Yard Planning Date
C Contract Date

* Actual Dates
Change from Last Issue (1 Sep 00)
† Combined Trials Alpha and Bravo
(2) Under Navy Review

DDG-51 Master Planning Schedule

DDG 51 CLASS MASTER PLANNING SCHEDULE
(DELIVERY TO SCN CUTOFF)

HULL/ YARD	UIC	SHIP NAME	CO/PCO	FLEET	HOME PORT	DELIVERY/ SCT	SAILAWAY	COMMISSIONING	FCT START	PSA START	PSA END	SCN CUTOFF
CURRENT AS OF 31 January 2001												
												OPR 400DP (703) 602-0408 x385
48#	22967	MUSTIN	CDR Ann Phillips#	PAC	SDGO	03-10-03#	05-12-03#	TBD	DEC 03#	JAN 04#	APR 04#	04-30-04#
90#	23155	CHAFEE	TBD	PAC	TBD	04-18-03#	08-15-03#	TBD	JAN 04#	FEB 04#	MAY 04#	07-31-04#
91#	23144	PINKNEY	TBD	TBD	TBD	10-08-03#	12-08-03#	TBD	DEC 04#	JAN 05#	MAR 05#	TBD#
92#	23160	MCIMSEN#	TBD	TBD	TBD	10-24-03#	02-20-04#	TBD	AUG 04#	SEP 04#	NOV 04#	01-31-05#
93#	23146	CHUNG-HOON#	TBD	TBD	TBD	04-05-04#	06-07-04#	TBD	JAN 05#	FEB 05#	APR 05#	05-31-05#
94#	23147	MITZER	TBD	TBD	TBD	04-23-04#	08-20-04#	TBD	MAR 05#	APR 05#	JUN 05#	07-31-05#
95#	23148	TBD	TBD	TBD	TBD	09-06-04#	11-08-04#	TBD	JUN 05#	JUL 05#	SEP 05#	10-31-05#
96#	23153	TBD	TBD	TBD	TBD	01-14-05#	05-13-05#	TBD	DEC 05#	JAN 06#	MAR 06#	04-30-06#
97#	23154	TBD	TBD	TBD	TBD	02-14-05#	04-11-05#	TBD	SEP 05#	OCT 05#	DEC 05#	05-31-06#
98#	23149	TBD	TBD	TBD	TBD	08-29-05#	10-31-05#	TBD	MAY 06#	JUN 06#	AUG 06#	09-30-06
99#	23150	TBD	TBD	TBD	TBD	06-05-05#	12-02-05#	TBD	JUL 06#	AUG 06#	OCT 06#	11-30-06#
100#	23152	TBD	TBD	TBD	TBD	02-20-06#	04-20-06#	TBD	SEP 06#	OCT 06#	DEC 06#	03-31-07#
101#	23151	TBD	TBD	TBD	TBD	04-07-06#	08-04-06#	TBD	MAR 07#	APR 07#	JUN 07#	07-31-07#

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* Actual Dates
Change from Last Issue (1 Sep 00)